C l a i m s

1. A multiple communication device of the type with parallel operation, comprising:

   - a first subunit (26) at least receiving input signals at a predetermined input level;

   - a second subunit (30) at least transmitting output signals at a specific time, frequency and output level such that said output level is very large compared to said input level of said first subunit (26); wherein

   - an operation mode of said first subunit (26) is modified when said second subunit (30) is transmitting output signals.

2. The multiple standard communication device of claim 1, wherein said first subunit (26) comprises an operation mode modification unit (34) to receive at least one signal specifying time, frequency and/or output level in said second subunit for operation mode modification in said first subunit.

3. The multiple standard communication device of claim 2, wherein said operation mode modification unit (34) is adapted to modify an input characteristic of said first subunit (26).

4. The multiple standard communication device of claim 3, wherein said input characteristic of said first subunit is modified through a low noise amplifier (36) having at least two operation modes and/or a tunable filter (38) and/or a switchable receiver (70) and/or an antenna with tunable gain.

5. The multiple standard communication device of claim 4, wherein said low noise amplifier (36) has at least two operation modes and comprises:

- a switchable bias network (40) adapted to define at least two biasing conditions of said low noise amplifier; and

- a switchable matching network (44) adapted to optimize noise performance, gain and stability of said low noise amplifier for said at least two biasing conditions; wherein

- a first biasing condition is related to a normal operation mode to optimize noise performance and achieve low current consumption in said first subunit (26) when no transmit bursts are generated by said second subunit (30); and

- a second biasing condition is related to a gain adjustment mode to improve blocking performance when transmit bursts are generated by said second subunit (30).

6. The multiple standard communication device of claim 5, wherein said operation mode modification unit (34) employs at least one signal to activate said normal operation mode, said at least one signal being selected from a group comprising:

- at least a signal indicating receiver operation;
- a signal to select frequency band and mode;
- at least one signal containing baseband information of said received signal;
- at least one signal being used to set a specific divider ratio; and
- at least one positioning system S/N measurement signal.

7. The multiple standard communication device of claim 5, wherein control and/or input signals defining a transmitter signal of said second subunit (30) are employed to activate said gain adjustment mode.

8. The multiple standard communication device of claim 7, wherein

at least one control signal is selected from a group comprising:

- a control signal indicating transmitter operation;
- a control signal adapted to activate an antenna switch in said transmitter;
- a control signal to select frequency band or mode;
- a control signal to set a ramping and power level of a power amplifier; and
- control signals that are used to set a transmitter specific divider ratio.

9. The multiple standard communication device of claim 7, wherein said at least one input signal is selected from a group comprising:

- input signals containing baseband information for transmission;
- a local oscillator input signal in a transmit/receive chain;
- transceiver transmitter signals detected by an RF-detector;
- interfering RF-signals received by an antenna (28) of said first subunit (26) and detected through a further detector.

10. The multiple standard communication device of claim 8, wherein said at least one input signal is selected from a group comprising:

- input signals containing baseband information for transmission;
- a local oscillator input signal in a transmit/receive chain;
- transceiver transmitter signals detected by an RF-detector;
- interfering RF-signals received by an antenna (28) of said first subunit (26) and detected through a further detector.

11. A multiple communication device of the type with parallel operation, comprising:

- a first subunit (26) at least receiving input signals at a predetermined input level;

- a second subunit (30) at least transmitting output signals at a specific time, frequency and output level such that said output level is very large compared to said input level of said first subunit (26); wherein

- an operation mode of said first subunit (26) is modified when said second subunit (30) is transmitting output signals;

- said first subunit (26) comprises an operation mode modification unit (34) to receive at least one signal specifying time, frequency and/or output level in said second subunit for operation mode modification in said first subunit;

- said operation mode modification unit (34) is adapted to modify an input characteristic of said first subunit (26);

- said input characteristic of said first subunit is modified through a low noise amplifier (36) having at least two operation modes and/or a tunable filter (38) and/or a switchable receiver (70) and/or an antenna with tunable gain;

- said low noise amplifier (36) has at least two operation modes and comprises:

  - a switchable bias network (40) adapted to define at least two biasing conditions of said low noise amplifier; and

  - a switchable matching network (44) is adapted to optimize noise performance, gain and stability of said low noise amplifier for said at least two biasing conditions; and wherein

- a first biasing condition is related to a normal operation mode to optimize noise performance and achieve low current consumption in said first subunit (26) when no transmit bursts are generated by said second subunit (30);

- a second biasing condition is related to a gain adjustment mode to improve blocking performance when transmit bursts are generated by said second subunit (30); and

- said switchable matching network is adapted to define said at least two biasing conditions for an amplification element (42) of said low noise amplifier.

12. The multiple standard communication device of claim 11, wherein said operation mode modification unit (34) employs at least one signal to activate said normal operation mode, said at least one signal being selected from a group comprising:

- at least a signal indicating receiver operation;
- a signal to select frequency band and mode;
- at least one signal containing baseband information of said received signal;
- at least one signal being used to set a specific divider ratio; and
- at least one positioning system S/N measurement signal.

13. The multiple standard communication device of claim 11, wherein control and/or input signals defining a transmitter signal of said second subunit (30) are employed to activate said gain adjustment mode.

14. The multiple standard communication device of claim 13, wherein

at least one control signal is selected from a group comprising:

- a control signal indicating transmitter operation;
- a control signal adapted to activate an antenna switch in said transmitter;
- a control signal to select frequency band or mode;
- a control signal to set a ramping and power level of a power amplifier; and
- control signals that are used to set a transmitter specific divider ratio.

15. The multiple standard communication device of claim 13, wherein said at least one input signal is selected from a group comprising:

- input signals containing baseband information for transmission;
- a local oscillator input signal in a transmit/receive chain;
- transceiver transmitter signals detected by an RF-detector;
- interfering RF-signals received by an antenna (28) of said first subunit (26) and detected through a further detector.

16. A multiple communication device of the type with parallel operation, comprising:

- a first subunit (26) at least receiving input signals at a predetermined input level;

- a second subunit (30) at least transmitting output signals at a specific time, frequency and output level such that said output level is very large compared to said input level of said first subunit (26); wherein

- an operation mode of said first subunit (26) is modified when said second subunit (30) is transmitting output signals; wherein

- said first subunit (26) conmprises an operation mode modification unit (34) to receive at least one signal specifying time, frequency and/or output level in said second subunit for operation mode modification in said first subunit;

- said operation mode modification unit (34) is adapted to modify an input characteristic of said first subunit (26);

- said input characteristic of said first subunit is modified through a low noise amplifier (36) having at least two operation modes and/or a tunable filter (38) and/or a switchable receiver (70) and/or an antenna with tunable gain; and

- said switchable matching network is adapted to define said at least two biasing conditions for an amplification element (42) of said low noise amplifier or

- said tunable filter (64) is adapted to block said interference signal only when transmit bursts are generated by said second subunit (30).

17. A multiple communication device of the type with parallel operation, comprising:

- a first subunit (26) at least receiving input signals at a predetermined input level;

- a second subunit (30) at least transmitting output signals at a specific time, frequency and output level such that said output level is very large compared to said input level of said first subunit (26); wherein

- an operation mode of said first subunit (26) is modified when said second subunit (30) is transmitting output signals; wherein

- said first subunit (26) comprises an operation mode modification unit (34) to receive at least one signal specifying time, frequency and/or output level in said second subunit for operation mode modification in said first subunit;

- said operation mode modification unit (34) is adapted to modify an input characteristic of said first subunit (26);

- said input characteristic of said first subunit is modified through a low noise amplifier (36) having at least two operation modes and/or a tunable filter (38) and/or a switchable receiver (70) and/or an antenna with tunable gain; and

- said switchable receiver comprises:

- a first low noise amplifier (72) being directly connected to an antenna adapted to receive a signal for localization and to amplify the position system localization signal;

- a second low noise amplifier (74) adapted to amplify the signal for localization; and

- a filter (76) connected between said antenna and said second low noise amplifier and adapted to reject blocking signals; and wherein

- in case a performance of said low noise amplifier (72) is limited due to an interfering signal said second low noise amplifier (74) with said filter (76) connected thereto is activated.

18. The multiple communication device of claim 17, wherein said low noise amplifier has at least two operation modes and comprises:

- a switchable bias network adapted to define at least two biasing conditions of said low noise amplifier; and

- a switchable matching network is adapted to optimize noise performance, gain and stability of said low noise amplifier for said at least two biasing conditions; wherein

- a first biasing condition is related to a normal operation mode to optimize noise performance and achieve low current consumption in said first subunit (26) when no transmit bursts are generated by said second subunit (30); and

- a second biasing condition is related to a gain adjustment mode to improve blocking performance when transmit bursts are generated by said second subunit (30).

19. The multiple standard communication device of claim 18, wherein said operation mode modification unit (34) employs at least one signal to activate said normal operation mode, said at least one signal being selected from a group comprising:

- at least a signal indicating receiver operation;
- a signal to select frequency band and mode;
- at least one signal containing baseband information of said received signal;
- at least one signal being used to set a specific divider ratio; and
- at least one positioning system S/N measurement signal.

20. The multiple standard communication device of claim 18, wherein control and/or input signals defining a transmitter signal of said second subunit (30) are employed to activate said gain adjustment mode.

21. The multiple standard communication device of claim 18, wherein

at least one control signal is selected from a group comprising:

- a control signal indicating transmitter operation;
- a control signal adapted to activate an antenna switch in said transmitter;
- a control signal to select frequency band or mode;
- a control signal to set a ramping and power level of a power amplifier; and
- control signals that are used to set a transmitter specific divider ratio.

22. The multiple standard communication device of claim 20, wherein said at least one input signal is selected from a group comprising:

- input signals containing baseband information for transmission;
- a local oscillator input signal in a transmit/receive chain;
- transceiver transmitter signals detected by an RF-detector;
- interfering RF-signals received by an antenna (28) of said first subunit (26) and detected through a further detector.

23. The multiple standard communication device of claim 21 wherein said at least one input signal is selected from a group comprising:

- input signals containing baseband information for transmission;
- a local oscillator input signal in a transmit/receive chain;
- transceiver transmitter signals detected by an RF-detector;
- interfering RF-signals received by an antenna (28) of said first subunit (26) and detected through a further detector.

24. A multiple communication device of the type with parallel operation, comprising:

- a first subunit (26) at least receiving input signals at a predetermined input level;

- a second subunit (30) at least transmitting output signals at a specific time, frequency and output level such that said output level is very large compared to said input level of said first subunit (26); wherein

- an operation mode of said first subunit (26) is modified when said second subunit (30) is transmitting output signals; wherein

- said first subunit (26) comprises an operation mode modification unit (34) to receive at least one signal specifying time, frequency and/or output level in said second subunit for operation mode modification in said first subunit;

- said operation mode modification unit (34) is adapted to modify an input characteristic of said first subunit (26);

- said input characteristic of said first subunit is modified through a low noise amplifier (36) having at least two operation modes and/or a tunable filter (38) and/or a switchable receiver (70) and/or an antenna with tunable gain; and

- antenna characteristics are adapted to enhance blocking performance of said first subunit (26) for shifting said frequency with maximum gain in case of presence of a blocking signal so as to provide additional attenuation for out of band signals.

25. A multiple communication device of the type with parallel operation, comprising:

- a first subunit (26) at least receiving input signals at a predetermined input level;

- a second subunit (30) at least transmitting output signals at a specific time, frequency and output level such that said output level is very large compared to said input level of said first subunit (26); wherein

- an operation mode of said first subunit (26) is modified when said second subunit (30) is transmitting output signals; wherein

- said first subunit is a global positioning system (GPS) receiver and said second subunit outputs two transmission signals according to a dual band mobile communication standard GSM 900/GSM 1900.

26. A method of operating a multiple standard communication device of the type with parallel operation, comprising a first subunit (26) at least receiving input signals at a predetermined input level and a second subunit (30) at least transmitting output signals at a specific time, frequency and output level such that the output level of the second subunit (30) is very large compared to the input level of the first subunit (26), comprising the step:

- modifying an operation mode of the first subunit (26) when the second subunit (30) is transmitting output signals.

27. The method of claim 26, wherein said operation mode of the first subunit (26) is modified in compliance with at least time, frequency and/or output level in the transmitting second subunit (30).

28. The method of claim 27, wherein said operation mode is modified by changing an input characteristic of the first subunit (26).

29. The method of claim 28, wherein said input characteristic of the first subunit (26) is modified via a low noise amplifier (36) having at least two operation modes and/or a tunable filter (64) and/or a switchable receiver (70) and/or a tunable antenna gain.

30. The method of claim 29,wherein operation mode modification is executed using at least one signal to activate a normal operation mode in the second subunit (30).

31. The method of claim 29, wherein control and/or input signals defining a transmitter signal in the second subunit (30) are employed to initiate the operation mode modification in the first subunit (26).

32. A computer program product directly loadable into an internal memory of a digital computer, comprising software code portions for performing a method of operating a multiple standard communication device of the type with parallel operation, comprising a first subunit (26) at least receiving input signals at a predetermined input level and a second subunit (30) at least transmitting output signals at a specific time, frequency and output level such that said output level of said second subunit (30) is very large compared to said input level of said first subunit (26), with a step modifying an operation mode of said first subunit (26) when said second subunit (30) is transmitting output signals when the computer program product is run on a computer.

33. The computer program product of claim 32 which is stored on a computer storage medium.